Spinal therapeutics before our times

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ABSTRACT

In the past, various "therapies" were prescribed for spinal deformities. The fathers of orthopedics, described those deformities and sometimes advised treatments like: traction, manipulation, electrical stimulation, exercises, braces, and etc. Some historical information is presented, to demonstrate these techniques.

Key words: spinal deformities, traction, electrical stimulation

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Received: 4. 10.2011
Accepted: 21.10.2011
Progress in Health Sciences
Vol. 1(2) · 2011 · pp 196-199.

Weiner and Silver [1] reviewed the results of the forceful spinal traction of spinal deformity, in the 19th century. Rarely, we are encountered today with paraplegia after scoliosis -C-D operations [2]. In the past, the hunchbacked attracted the attention of writers and poets [3].

Since the dawn of history, man sought effective treatments for spinal problems. Bick's Source Book of Orthopaedic" [4] gives more information: (p 428)" ..spinal curvature has occupied the attention of all students of skeletal deformity since Hippocrates. between Galen in the 2nd century and Glisson in the 17th, little was added to the description found in Hippocrates, and almost the only new factor was the negative one of a more or less general disregard of the Greek's method of forced correction."

Andry in 1741 published a famous book called: *L'Orthopédie, ou l'art de prévenir et de corriger dans les enfants, les difformités du Corps'* ("Orthopaedia: or the Art of Correcting and Preventing Deformities in Children).

He had noticed that many of the deformities of adolescence originate in childhood. He recommended: rest, corsets, exercise and posture and not manipulation. Andry was a professor of Medicine at the University of Paris and Dean of the faculty of Physick. He believed that deformities could be prevented and cured by exercises. Later, the word 'orthomorphic' was used by Jacques Delpech (1777–1832) in 1828 and 'orthopraxy' by Henry Robert Heather Bigg in 1865.

The earliest recorded Institute for the treatment of skeletal deformities was the hospital at Orbe (Canton Vaud) in Switzerland established in 1780 by Jean André Venel (1740–91) of Geneva. This was the first true hospital that dealt specifically with the treatment for children's skeletal deformities. Venel stressed the importance of sunlight and made various braces and appliances at the workshops within the Institute.

Robert Chessher of Hinckley in Leicestershire (1750–1831) was a contemporary of Venel. He specialized in the correction of deformities. He was not a "surgeon" but made ingenious devices for the correction of deformities. He had a workshop in his house. He produced the most refined apparatus for the correction of spinal deformity before the Milwaukee brace and was the first British 'orthopaedist'(Fig. 2).

Percival Pott (1714-1788) worked in St. Bartholomew's Hospital, where he received the diploma of the Barber-Surgeons' Company in 1763. He stated that spinal problems were more common than suspected. Manipulation and extension were considered useless and dangerous. Pott's most famous work is on the paraplegia of spinal tuberculosis. This is known as Pott's paraplegia…Ancient Chinese and Greek medicine revived by an opponent of Pott, Edward Harrison, in his 1821 series of articles titled: "Observations respecting the nature and origin of the common species of disorders of the spine: with critical remarks on the opinions of former writers on the disease." Edward Harrison (1766, Lancashire - 1838, Marlborough) studied in London under John and William Hunter, and in Edinburgh where he received his doctorate in 1784. He practiced in Horncastle, Lincolnshire for 30 years, founding the Horncastle Dispensary and the Lincolnshire Medical Benevolent Society. He reported on the lack of regulation of physicians, surgeons and apothecaries, His plan was thwarted by the Royal College of Physicians. He also founded the first infirmary for spinal diseases in London in 1837 [5]: *" He developed a new method involving the massage and manipulation of individual vertebrae that he concentrated on for the rest of his life, and lead to his worldwide fame, or notoriety. He cured Charlotte's cousin within a year, enabling her to return to the social activities that she had previously abandoned, due to her discomfort."* [6].

Massage, pressure, traction and manipulation of the spine have ancient roots and popularity that have varied along the years. Today, one can find other means of treatments: laser puncture, roller-acupressure, magnet therapy**,** postizometric relaxation and chiropractic (started by David Daniel Palmer (1845-1913) in the late 1800s).

Palmer's effort to find a single cause for all disease led him to say: "*A subluxated vertebra… is the cause of 95 percent of all diseases. the other five percent is caused by displaced joints other than those of the vertebral column*" [7].

Chiropractors use multiple "therapeutic techniques: spinal manipulative therapy, diet, exercise, X-rays, interferential and electrogalvanic muscle stimulation, etc. In 1910 Abrams [Albert Abrams (1863–1924)] was a doctor, who used "electricity therapy" he called ERA (Electronic Reactions of Abrams or: Radionics), published a book on a "medical technique"' he called *Spondylotherapy*. It was his version of Chiropractic and Osteopathy, which were criticized by the medical establishment at the time. He was regarded as a quack and fraud. Spinal therapeutics also included use of orthotics, braces and corsets.

"I *was assigned to the outpatient a departmecorsets when I had been familiar in Italy. Here, I attended to about fifty to seventy patients each day. All of them suffered from the kind of bodily deformity, ranging from club-foot to tuberculosis and deviation of the spine…(p 52) …the serious cases were treated under anaesthetic, but the sight of the human body being subjected to forceful and weird manipulations, to say nothing of the numerous instruments that looked more like medieval instruments of torture, impressed*

themselves on my mind to such an extent, I was not able to forget them (p 53).

....Another treatment –still more unpleasant, and I think, unnecessary- is that meted out to people suffering from curvature of the spine, medically known as " adolescent scoliosis." For this purpose, an eminent Italian surgeon, Galeazzi by name, invented a huge machine – so large, indeed, that it takes up the better part of an average operating room. It consists of two huge metal arches between which a chair is fixed. By clamps and gears the patient's body is literally twisted with enormous force into a posture desired. Supposing that the curvature inclined to the left, then the clamps would be fixed, and the body would be forced around to an exaggerated and unnatural position to the right. The patient would then put in a corset made of plaster of Paris. The effect is very unpleasant. The patient's arm is fixed in plaster- suspended, as it were, in mid-air- and his whole body is twisted, so that he walks about like a grotesque paralytic for about three months" [8].

Ricardo Galeazzi (1866-1952) of Milan had great experience in congenital dislocation of the hip and structural scoliosis, but is best known for the forearm fracture that he described in 1934 (Fig. 1). This is the Galeazzi fracture, which is actually more common than Monteggia's fracture.

Figure 1. Ricardo Galeazzi (1866-1952).

Finally, various treatments were given for erroneous spinal diagnoses: *"Spinal Irritation is characterized by multiple tender spots distributed over the female body, probably caused by sexual excess. A couple of leeches to the inside of the nostrils are remarkably efficacious [and as for] counter-irritants, such as blisters, croton oil, tartarized antimony, and the actual cautery, cases every now and then appear in which they seem to be of service* [9,10].

I *suppose the most generally advantageous agent of the kind is the actual cautery very lightly applied to the nuchae*" [9].

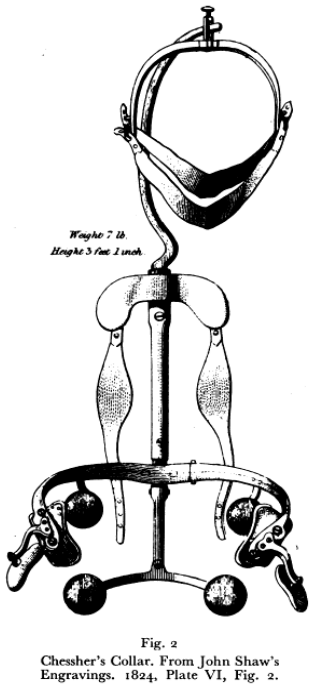

Fig. 2
Chessher's Collar. From John Shaw's Engravings. 1824, Plate VI, Fig. 2.

Figure 2. Chessher's Collar [11].

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